CURRICULUM VITAE

NAME

Erin Evelyn Gabriel

BIRTH DATA

Born 1981-08-14, New York, USA.
United States Citizen. Resident of Sweden.

ADDRESS

Home:
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COURSES AND DEGREES

University of Washington, Seattle, WA USA

M.S., Biostatistics, September 2007 – August 2009

McGill University, Montréal, QC CA

M.A., Economics, August 2002 – October 2004

Washington College, Chestertown, MD USA

B.A., Mathematics, August 1999 – August 2002

DOCTORAL DEGREE

University of Washington, Department of Biostatistics Seattle, WA USA

Ph.D., Biostatistics, September 2007 – August 2012

- Dissertation Topic: *Evaluation of Potential Surrogate Endpoints*
- Date: 2012/08/10
- Advisor: *Professor Peter B. Gilbert Ph.D.*

POSTDOC APPOINTMENTS

Center for Statistics and Quantitative Infectious Diseases (CSQUID) at the Fred Hutchinson Cancer Research Center, Seattle, WA USA

Postdoctoral Fellow 2012 – 2013

- Advisor: Professor M. Elizabeth Halloran M.D. Ph.D.

CURRENT POSITION

The Unit of Biostatistics, Institute of Environmental Medicine, Karolinska Institutet, Stockholm, Sweden.

Guest Researcher (November 2016–Present)

The proportion of my time that is devoted to research is 100%.

Biostatistics Research Branch, National Institute of Allergy and Infectious Diseases (NIAID), National Institutes of Health (NIH), Bethesda, MD USA

Mathematical Statistician (August 2013–Present)

The proportion of my time that is devoted to research is 25%, to collaboration is 73% and to service work is 2%.

Fred Hutchinson Cancer Research Center, Seattle, WA USA

Affiliate Investigator (August 2013–Present)

PRIOR POSITIONS

Vaccine and Infectious Disease Division at the Fred Hutchinson Cancer Research Center, Seattle, WA USA

Research Assistant (Sept 2009–August 2012)

Resuscitation Outcomes Consortium, Seattle, WA USA

Research Assistant (Sept 2007–Sept 2009)

Department of Biostatistics, Bioinformatics, and Biomathematics, Georgetown University, Washington, D.C. USA

Research Intern: Under Dr. Francoise Seillier–Moiseiwitsch (Sept 2006–June 2007)

SELECTED ACADEMIC DISTINCTIONS AND OTHER MERITS

- NIH Clinical Research on AIDS Training Grant (2009–2012)
- NIH Cancer Epidemiology Training Grant (2007–2009)

LANGUAGE SKILLS

Native English speaker

REFERENCES

- Branch Chief Dean Follmann PhD. Current supervisor. dean.follmann@nih.gov
- Professor M Elizabeth Halloran MD ScD. Post-doc supervisor. betz@fhcrc.org
- Professor Peter B Gilbert PhD. Doctoral supervisor. pgilbert@scharp.org

SCIENTIFIC PORTFOLIO

SCIENTIFIC PUBLICATIONS

Bibliometric parameters

Papers	Citations	H-index
20	223	8

Peer-reviewed original articles

1. Sissoko MS, Healy SA, Katile A, Omaswa F, Zaidi I, **Gabriel EE**, Kamate B, Samake Y, Guindo MA, Dolo A, Niangaly A, Niaré K, Zeguime A, Sissoko K, Diallo H, Thera I, Ding K, Fay MP, O'Connell EM, Nutman TB, Wong-Madden S, Murshedkar T, Ruben AJ, Li M, Abebe Y, Manoj A, Gunasekera A, Chakravarty S, Sim BK, Billingsley PF, James ER, Walther M, Richie TL, Hoffman SL, Doumbo O, Duffy PE. Safety and efficacy of PfSPZ vaccine against plasmodium falciparum via direct venous inoculation in healthy malaria-exposed adults in Mali: a randomised double-blind phase 1 trial. *The Lancet Infectious Diseases.* 2017; Epub ahead of print.

2. Li Q, Bu W, **Gabriel EE**, Aguilar F, Hoshino Y, Miyadera H, Hess C, Hornung RL, Roy A, Cohen JI. HLA-DQ β1 alleles associated with Epstein-Barr virus (EBV) infectivity and EBV gp42 binding to cells. *JCI insight.* 2017; 2(4):e85687.

3. Hobbs CV, **Gabriel EE**, Kamthunzi P, Tegha G, Tauzie J, Petzold E, Barlow-Mosha L, Chi BH, Li Y, Ilmet T, Kirmse B, Neal J, Parikh S, Deygoo N, Philippe PJ, Mofenson L, Prescott W, Chen J, Musoke P, Palumbo P, Duffy PE, Borkowsky W, 1068s Study Team. Malaria in HIV-Infected children receiving HIV protease-inhibitor compared with non-nucleoside reverse transcriptase inhibitor-based antiretroviral yherapy IMPAACT P1068s substudy to P1060. *PloS one.* 2016; 11(12):e0165140.

4. Brickley EB, Coulibaly M, **Gabriel EE**, Healy SA, Hume JC, Sagara I, Traore SF, Doumbo O, Duffy PE. Utilizing direct skin feeding assays for development of vaccines that interrupt malaria transmission: a systematic review of methods and case study. *Vaccine.* 2016; 34(48):5863–5870.

5. Talaat KR, Ellis RD, Hurd J, Hentrich A, **Gabriel EE**, Hynes NA, Rausch KM, Zhu D, Muratova O, Herrera R, Anderson C, Jones D, Aebig J, Brockley S, MacDonald NJ, Wang X, Fay MP, Healy SA, Durbin AP, Narum DL, Wu Y, Duffy PE. Safety and immunogenicity of Pfs25-EPA/Alhydrogel®, a transmission blocking vaccine against plasmodium falciparum: an open label study in malaria naïve adults. *PloS one.* 2016; 11(10):e0163144.

6. Follmann DA, Huang CY, **Gabriel EE**. Who really gets strep sore throat? Confounding and effect modification of a time-varying exposure on recurrent events. *Statistics in Medicine.* 2016; 35(24):4398–4412.

7. **Gabriel EE**, Daniels MJ, Halloran ME. Comparing biomarkers as trial level general surrogates. *Biometrics*. 2016; 72(4):1046–1054.*

8. Sachs MC, **Gabriel EE**. An Introduction to principal surrogate evaluation with the pseval package. *The R Journal*. 2016; 8(2):277–292.

9. **Gabriel EE**, Follmann DA. Augmented trial designs for evaluation of principal surrogates. *Biostatistics*. 2016; 17(3):453–467.*

10. Fiore-Gartland A, Manso BA, Friedrich DP, **Gabriel EE**, Finak G, Moodie Z, Hertz T, De Rosa SC, Frahm N, Gilbert PB, McElrath JM. Pooled-peptide epitope mapping strategies are efficient and highly sensitive: an evaluation of methods for identifying human T cell epitope specificities in large-scale HIV vaccine efficacy trials. *PloS one*. 2016; 11(2), e0147812.

11. Gilbert PB, **Gabriel EE**, Huang Y, Chan I. Surrogate endpoint evaluation: principal surrogate criteria and the prentice definition. *Journal of Causal Inference*. 2015; 3(2):157-175.

12. **Gabriel EE**, Sachs MC, Gilbert PB. Comparing and combining biomarkers as principle surrogates for time-to-event clinical endpoints. *Statistics in Medicine*. 2015; 34(3):381-395.*

13. Gilbert PB, **Gabriel, EE**, Miao X, Li X, Su SC, Parrino J, Chan I. Fold rise in antibody titers by gpELISA is an excellent correlate of protection for a herpes zoster vaccine, demonstrated via the vaccine efficacy curve. *The Journal of Infectious Diseases*. 2014; 210(10):1573–1581.*

14. **Gabriel EE**, Gilbert PB. Evaluating principle surrogate endpoints with time-to-event data accounting for time-varying treatment efficacy. *Biostatistics*. 2014; 15(2):251–265.*

15. Kunwar P, Hawkins N, Dinges WL, Liu Y, **Gabriel EE**, Swan DA, Stevens CE, Maenza J, Collier AC, Mullins JI, Hertz T, Yu X, Horton H. Superior control of HIV-1 replication by CD8+ T cells targeting conserved epitopes: Implications for HIV vaccine design. *PloS one*. 2013; 8(5):e64405.

16. Forthal D, **Gabriel EE**, Wang A, Landucci G, Phan TB. Association of Fcγ receptor IIIa genotype with the rate of HIV infection following gp120 vaccination. *Blood*. 2012; 120(14):2836–2842.

17. Janes H, Frahm N, DeCamp A, Rolland M, **Gabriel EE**, Wolfson J, Hertz T, Kallas E, Goepfert P, Friedrich DP, Corey L, Mullins J, McElrath MJ, Gilbert PB. MRKAd5 HIV-1 gag/pol/nef vaccine-induced T-cell responses inadequately predict distance of breakthrough HIV-1 sequences to the vaccine or viral load. *PLoS ONE*. 2012; 7(8):e43396.

18. Defawe OD, Fong Y, Vasilyeva E, Pickett M, Carter DK, **Gabriel EE**, Rerks-Ngarm S, Nitayaphan S, Frahm N, McElrath MJ, De Rosa SC. Optimization and qualification of a multiplex bead array to assess cytokine and chemokine production by vaccine-specific cells.

Journal of Immunological Methods. 2012; 382(1-2):117–128.

19. Gilbert PB, Grove D, **Gabriel EE**, Huang Y, Gray G, Hammer SM, Buchbinder SP, Kublin J, Corey L, Self SG. A sequential phase 2b trial design for evaluating vaccine efficacy and immune correlates for multiple HIV vaccine regimens. *Statistical Communications in Infectious Diseases*. 2011; 3(1):1037.

20. Bradley SM, **Gabriel EE**, Aufderheide TP, Barnes R, Christenson J, Davis DP, Stiell IG, Nichol G, the Resuscitation Consortium Investigators. Survival increases with CPR by emergency medical services before defibrillation of out-of-hospital ventricular fibrillation or ventricular tachycardia: observations from the Resuscitation Outcomes Consortium. *Resuscitation*. 2010; 81(2):155–162.

INTERNATIONAL SCIENTIFIC CONGRESSES

Invited speaker or chair

Gabriel EE, Augmented trial designs for evaluation of principal surrogates. *Brown University, Biostatistics Department Seminar Series*, October, 2016

Gabriel EE -Organizer; Neaton J, Levine A, Upshur R -Speakers. Courage, controversy, and clinical trials: lessons from the Ebola epidemic. *Society of clinical trials*, May, 2016

Gabriel EE, Why Correlates of protection are good targets for vaccine improvement and correlates of risk are not. *LMIV NIAID NIH, seminar series*, September, 2015

Gabriel EE, Individual and trial level correlates and surrogates, why the details matter and why they are not the same. *The Western North American Region of The International Biometric Society*, June, 2015

Oral presentations of own accepted abstracts

Gabriel EE, Intelligent viral load monitoring: a modeling study from Rakai, Uganda. *International Workshop on HIV observational databases*, April, 2016

Gabriel EE, Early phase transmission blocking vaccine trials: evaluation without validated surrogates. *Society of clinical trials*, May, 2016

Gabriel EE, Follmann D. Experimental designs for assessing intermediate response measures as surrogates. *Joint Statistical Meeting*, 2014

Gabriel EE, Halloran ME. Comparing biomarkers as trial level general surrogates. *Joint Statistical Meeting*,2013

Gabriel EE, Gilbert PB. Semi-parametric Evaluation of Specific Surrogates of Protection for Time-to-Event Clinical Endpoints Allowing for Time-Varying Treatment Effects. *Joint Statistical Meeting*, 2012

Gabriel EE, Gilbert PB. Evaluation of Biomarkers as Principal Surrogates for Time-to-Event Endpoints. *Joint Statistical Meeting*, 2011

RESEARCH FUNDING OBTAINED IN THE PAST FIVE YEARS

- NIH Clinical Research on AIDS Training Grant (2009-2012)

SCIENTIFIC COLLABORATIONS

I have ongoing statistical collaborations with:

- Associate Professor Arvid Sj?lander PhD: Karolinska Institutet Department of Medical Epidemiology and Biostatistics.
- Dr. Michael Sachs PhD: Karolinska Institutet Unit of Biostatistics Institute of Environmental Medicine.
- Professor M. Elizabeth Halloran MD ScD: University of Washington Department of Biostatistics and Fred Hutchinson Cancer Research Center, Seattle WA USA.
- Professor Michael Daniels ScD: Chair of The University of Texas at Austin Department of?Statistics?and Data Sciences, Austin Texas USA.
- Professor Michael Hudgens PhD: University of North Carolina Department of Biostatistics, Chapel Hill North Carolina USA.
- Dr. Dean Follmann PhD: Branch Chief of Biostatistics Research Branch NIAID NIH, Rockville Maryland USA.
- Dr. Lori Dodd PhD: Biostatistics Research Branch NIAID NIH, Rockville Maryland USA.
- Dr. Martha Nason PhD: Biostatistics Research Branch NIAID NIH, Rockville Maryland USA.
- Dr. Michael Fay PhD: Biostatistics Research Branch NIAID NIH, Rockville Maryland USA.

I have ongoing applied/medical collaborations with:

- Dr. Irini Sereti MD: principal investigator HIV pathogenesis Unit NIAID NIH, Bethesda Maryland USA. I work with Dr. Sereti on a number of IRIS studies.
- Dr. Patrick Duffy MD and Dr. Sara Healy MD: Chief and principal investigator Laboratory of Malaria Immunology and Vaccinology (LMIV) NIAID NIH, Rockville Maryland USA. I work with Drs. Duffy and Healy on a number of malaria vaccine trials, laboratory experiments and observational trials in malaria transmission.
- Dr. Michele Di Mascio PhD: Mathematical Biologist, Biostatistics Research Branch, NIAID NIH Rockville Maryland USA. I work with Dr. Di Mascio on several immunological imaging experiments in non-human primates.
- Dr. Steven J. Reynolds MD MPH: Scientific Director ICER Uganda, staff clinician at NIAID NIH, Bethesda Maryland USA and an Associate Professor of Medicine at Johns Hopkins University School of Medicine, Baltimore Maryland, USA. I have worked with Dr. Reynolds on a number of projects including a HIV treatment monitoring mathematical modeling project that should soon be submitted.

I have many international collaborators on the ZIP cohort study. I serve as one of the primary biostatisticians, along with Dr. Martha Nason, for the parent protocol of this multi-site, multi-country, observational cohort of the Zika virus and pregnancy and infant outcomes.

Referee for scientific journals

1. *Biometrics*
2. *Statistics in Medicine*
3. *PNAS*
4. *Clinical Trials*
5. *Statistical Methods in Medical Research*
6. *Biostatistics*
7. *Journal of Neurosciences in Rural Practice*
8. *Vaccine*